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ACHIEVING A COMMON INFORMATION SYSTEM

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SAN FRANCISCO DEPARTMENT OF CITY PLANNING, FEBRUARY 1969

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I. INTRODUCTION

A. PURPOSE OF THIS REPORT

This report deals with the need for and the means of achieving an information system for the Department of City Planning. If the City is to improve its system of information for more effective planning and programming, the combined resources of a number of interested City agencies must be utilized. It is the purpose of the report to discuss the findings of a study of informational needs of the Department of City Planning, the resources available and necessary to satisfy these needs, and the best means of achieving the system desired. Our study shows that the informational needs of the Department are found to exceed its informational resources, and for that reason, the report is also concerned with the resources found and the needs expressed by other City agencies. While this is not a feasibility study for the precise design of an information system, our analysis leads to recommendations for a program to achieve what may be called a Common Information System, one which would benefit not only this Department, but other prospective participants in such a system.

B. BACKGROUND

1. The Nature of a Common Information System

The phrase, "common information system", refers to a method by which information may be standardized, stored,

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more efficient basis. Considered as a filing system, the computer is superior to most manual systems because of its enormous capacity for storage in a number of different media, and the speed with which information can be retrieved from its memory. These advantages, however, can only be achieved if certain rigorous criteria are observed.

First, the information to be stored must be standardized and the methods for its storage and extraction precisely specified. Second, it must be accessible to its users. Third, the costs of storage and extraction must be within the reach of the participating agencies. While manual files often conceal ineffective practices and excessive costs of information collection, storage, and retrieval, the computer in requiring that both practices and costs be made explicit, makes its users far more conscious of these critical factors.

One of the objectives of the Community Renewal Program for San Francisco was the creation of an information system that would permit decisions about renewal actions to be made using the computer as an essential tool. Among the first studies undertaken was a survey of information kept by various City agencies to evaluate its use in the construction of a simulation model. Review of these records soon indicated that they were neither sufficiently

comprehensive nor consistent for this purpose. However, this survey of City records did emphasize the need for attention to this neglected area. In 1965 the City began to acquire its first large-scale computer. While the first application of this equipment was to the more conventional functions of accounting, it was soon recognized that its capability could be extended to a number of information handling functions as well. In April, 1966, a special subcommittee of the Inter-Agency Committee on Urban Renewal was formed to study the creation of a joint information system by sharing the resources of individual agencies. In October, 1966, formal meetings of the Subcommittee came to an end. Since that time, data processing projects have been sponsored by several public agencies. Some of these are reviewed in the report. Regardless of the individual efforts pursued to achieve a data processing system, whether as ambitious as that of the Office of the Assessor or of more limited scope such as this Department's Housing Inventory information, it is clear that an effective system cannot be achieved by a piecemeal approach. The viewpoint of the Subcommittee, that the only effective way to achieve a comprehensive and efficient information system is through mutual action, has been further reinforced by experience since 1966.

II. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

This study has made the following conclusions clear:

1. A common information system in which a number of City departments share their resources for the satisfaction of individual needs is both needed and possible.

2. The need to consider the creation of such a system is immediate; at the present time three major departments -- the Assessors, Social Services, and Police -- have already invested substantial amounts of time and money in the development of systems to meet their own requirements. Further delay in the development of a common system will complicate an already complex situation. While the development of individual systems may be necessary to meet certain specific requirements, the absence of a common approach is costly and wasteful.

3. Standardization of information classifications, definition, and collection is urgently needed before existing systems are so well founded that compatibility, and consistency of information collected by various departments becomes difficult, if not impossible, to assure.

4. Before any specific proposals for a systems design are made, there must be a joint participation in the process

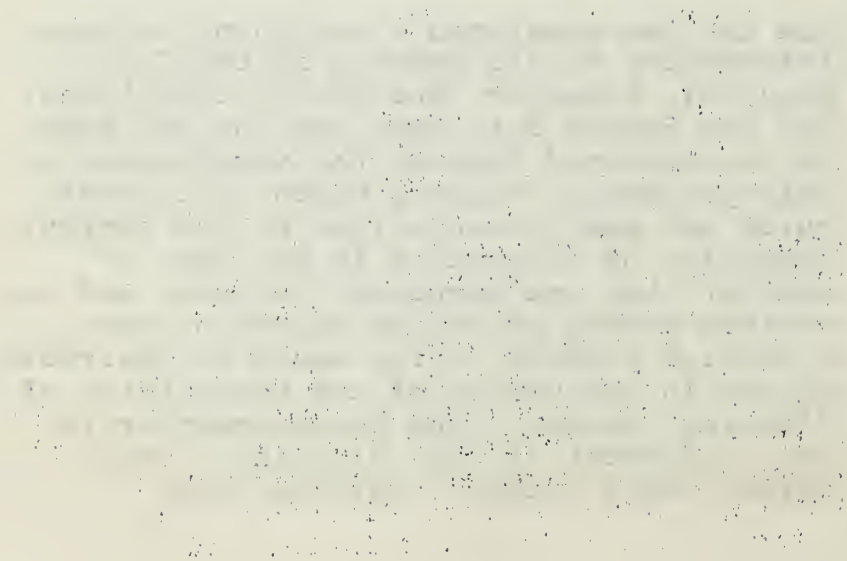
of arriving at the scope of such a system by interested City departments.

5. The task of systems design and operation is large and expensive. This fact, and the willingness of the participants to accept it, is paramount if any serious work on systems design is to proceed.

6. It will be desirable to coordinate the construction of an information system with other local systems, either developed or proposed, to the extent consistent with the special interests and objectives of the participating City departments. Participation in a regional information system would be of especial benefit to the Department of City Planning.

7. The construction of a common information system is in keeping with the following recommendation made by the consultants for the Community Renewal Program:

> "The CRP has developed a wealth of valuable information on all aspects of the City's physical, economic, and social conditions. But the future data base for the CRP must be strengthened through the development of data-processing systems which will permit quick and easy computations of the current condition of properties in the City -- whether they are occupied, by whom, and the various market pressures affecting them. A central records office would be desirable either in the Office of the Coordinator of Planning, Housing, and Development or in the Department of City Planning. This office would collect, collate, and



> disseminate relevant data from City, State, and Federal sources, and serve as a source of comprehensive and continually updated information upon which the Office of the Coordinator of Planning, Housing and Development, the Department of City Planning, and others could base their future programs and policies and test the results of past programs and policies." [1]

Although the information system proposed in this report is broader in scope than that mentioned in the Community Renewal Program report, since it is viewed as an inter-departmental effort rather than a clearing house operated by a specific agency, it is obvious that it will in effect accomplish the same purpose. It is premature to locate the administrative center of the system at this stage of analysis, however, this matter will ultimately be resolved when the detailed systems design is accomplished.

8. The costs of development of an information system are difficult to quantify. However, there is every indication, based upon local experience (see Section V of this report) and on the experience of other jurisdictions who have undertaken such development, that the expense of a fully developed system, supplying the informational requirements of all of the participants in a satisfactory manner, may amount to millions of dollars. This, even given the

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[1] Final Report to City Planning Commission, San Francisco Community Renewal Program, Arthur D. Little, Inc., October, 1965, p. 161.

anticipated saving of time through the elimination of duplication and standardization of procedures, is a heavy burden for the community to bear. Since such a system is certainly in line with the proposals for the Community Renewal Program and since it must be considered a sustaining element of that program, one which will keep it current, and since a number of other municipalities have developed systems with substantial assistance for their work from the Federal Government, it is concluded that once agreement has been reached between the various agencies desiring to participate, a request for assistance from the Department of Housing and Urban Development or whatever relevant Federal Agency be made.

B. RECOMMENDATIONS

1. If the conclusions of this report meet with the approval of the agencies who seek involvement in the development of a common information system, it is recommended that a strong joint committee be formed (see Section C) to study and make recommendations for its design and effectuation. Unless this first and most important step is taken, there will be no firm ground for the expenditure of time and money systems development will require. A piecemeal approach to the development of a common information system will ultimately prove more costly and less beneficial than a unified effort to solve a common problem.

2. It is recommended that the Office of the Mayor and the Board of Supervisors give their endorsement to this project. If the project proves feasible in the opinion of the participating departments, the informational resource it is capable of providing will be of great value in the formulation and effectuation of programs and policies having profound impact on the development of this city. It is, therefore, of great interest to the community as well as to the government of the City to see a common information system developed.

3. Given the expenditure of time and funds necessary to design and effect such a system, it is strongly recommended that every avenue for subsidizing this effort through Federal grants be explored. One such possible avenue is a Community Renewal Program grant.

C. STEPS TO BE TAKEN IN THE ACHIEVEMENT OF A COMMON INFORMATION SYSTEM

The achievement of a common information system requires the services of representatives from those departments who have expressed interest in its development. Before any specific systems design can begin, a number of the problems outlined in this report must be resolved.

STEP 1. A strong committee consisting of representatives of the City departments who have shown an interest in the development of a Common Information System must be formed

The membership of this committee would include, at minimum, representatives of the Office of the Assessor, Department of Public Works, Department of Public Health, and the Department of City Planning, and the Electronic Data Processing Division. Other City departments expressing a strong interest in participation in such a system would also be included. The above departments have been chosen because they are the most immediately concerned with collecting and sharing information about the physical aspect of city, which is the most readily implemented part of the system and the one of obvious and immediate need. The agenda of this committee would include items such as the identification in detail of common information needs and resources, covered in part in the Appendix to this report, the joint responsibilities for participating in the development and maintenance of an information system, and the standardization of information to be included in such a system. Agreement upon these items will then make it possible to proceed to the next step.

STEP 2. Specification of the system to be developed

When agreement has been reached between members of the committee, a report on the scope of the proposed system should be prepared which will specify in detail the kind of system desired, the items to be included in such a system, the degree of participation by each department in the development of the system and in its operation, and the special requirements and abilities of each of the participants.

STEP 3. Determining the most appropriate means of designing the system

The task of designing a system that will suit the requirements of the participants is a large one. It may require the services of a consultant if City staff are not available for the job. A review of the proposal prepared in Step 3 will determine how best to accomplish systems design, and the cost of the project.

STEP 4. Designing the system

Judging from available experience, the careful design of an information system will require time, money, and effort. Even if large sums of money are readily obtainable, there will have to be active participation by key staff members in the preparation for system design. Most of the initial and continuing work will

be expended in the preparation of information to be included in the system. The establishment of procedures for maintaining and operating the system will also be exacting and time consuming. The people who plan to use the system must play an active role in its development and maintenance. Their first-hand experience with the kinds of information to be included in the system with the procedures for its collection, editing, and maintenance is the most valuable resource which can be offered. It is essential that the users be thoroughly familiar with the operation of the system and that the system be well documented if it is to function at its best capability. Once definite responsibilities for participation in the system have been established, they must be rigorously held to by the participants. All of the participants must be prepared to allocate considerable staff time at all levels for this aspect of the operations. If it is determined appropriate to hire consulting help for the design of the system, the role of the consultant should be that of expert advisor, rather than complete developer of the system.

STEP 5. Exploration of funding for the project

As noted in the conclusions of this report, the development of a comprehensive, operational information

system may require resources which exceed the immediate fiscal capability of the City. It is strongly suggested that routes for subsidizing the development of the system be explored. One such logical route, given previous experience with the Community Renewal Program and considering the means that other communities such as Oakland have employed, is to request funds from the Federal Government as a part of a new Community Renewal Program grant. The aim of this second grant for Community Renewal Program study would be to put into effect a number of the worthwhile recommendations made in the earlier study in greater measure than has been possible since the end of that work.

V. ACHIEVEMENT OF A COMMON INFORMATION SYSTEM

A. THE NEED FOR A COMMON INFORMATION SYSTEM

The study of the informational needs of the Department of City Planning and of other City departments, of the resources for meeting those needs, and of the interest in sharing and further developing those resources points to a Common Information System as the best means for satisfying mutual requirements. A number of City departments already spend, or have budgeted money for data processing services. Nearly $2.5 million were budgeted for such services by City departments interviewed in our survey for the fiscal year of 1968-69. The Assessor, the Police Department, and the Department of Social Services, who account for more than half of this total, are directing their principal expenditures toward the development and implementation of information systems for their own use. The Assessor has spent over $800,000 in the past three years on a property information system, and the Department of Social Services anticipates spending over $1 million which will give them a comprehensive system suited to their needs.

The development of individual systems to meet the requirements of particular departments would probably be necessary, even if the common system here proposed is adopted for a common system cannot contain all of the information that any individual participant may desire. However, the general activity in

systems design and implementation by various departments pursuing their own independent course of action is symptomatic of both a need for the advantages of an electronic data processing system and of the possible difficulties which independent systems design may pose.

If there is to be a comprehensive and consistent system developed which will serve the many needs for information upon which this study has touched, and needs which cannot now be anticipated, it is time to suggest that very careful consideration be given to the development of an information system as a whole rather than in independent units which may not be reconcilable. In the long run, such a system development would probably not only serve mutual interests better, but be less expensive to develop. The urgency of this proposal is great because there is a growing impatience to develop individual systems based on real needs for services that information systems can render.

B. PROBLEMS IN THE DEVELOPMENT OF A COMMON INFORMATION SYSTEM

While this report is not a feasibility analysis of the design of an information system, it is appropriate here to point out some of the basic problems that must be resolved if a system is to be successfully developed.

1. Interagency Participation and Coordination

In order to be effective, there must be a willingness on

the part of all agencies having information vital for the system to participate in its formulation and operation. This will impose upon those interested in the system a responsibility to see that it functions usefully for all of its members. To achieve this, there must be a formal means for coordination of the effort needed to make the system a reality.

2. Adoption of a Standard System of Definitions and Classification of Information

Consistency of terminology and classification is a prime requirement of a useful data system. An item of information must have a uniform meaning, regardless of the agency or agencies involved in its collection. Similarly, the basic unit upon which the information is collected must be commonly agreed upon. All systems of classification of materials must be uniform throughout the system, for the system to be mutually useful. The introduction of consistency throughout the starting point for systems design. Agreement upon terms and upon the kind of information to be collected will probably require the greatest expenditure of time in the design of an effective common information system.

3. Establishment of a Comprehensive System of Information, Collection, Storage, Maintenance, and Quality Control

If a common information system is established, the procedures by which information is collected, stored, and

maintained by the participating members will have to be carefully reviewed. In addition to establishing consistency of the information collected, one of the important functions of such study is the rationalization of collection of information and control of its quality. While wasted effort is desirably eliminated in the operation of the system, the quality of the information collected must not be compromised. Further, procedures for making sure the data is timely must be established and adhered to.

4. Access to the Information

Of prime importance to those who will rely upon a common information system is access to it. Certain information may be withheld from joint use because it is confidential and disclosure forbidden. However, the more important issue from the point of the user is how quickly he is able to obtain the information he needs from the system. In this respect, there may be considerable variation in priorities: Some users will want virtually immediate retrieval, while others will be able to submit their requests and wait a reasonable length of time for satisfaction. However, the system must be capable of improving upon the quantity, quality, and time required for information gathering that they enjoy from being independent of the system if they are to be attracted to it. Much care must be used in the development of retrieval programs and the ability to

produce programs to customer specifications must be stressed. Liaison between the user of information and the vendor must be such that frustration and delay are kept to a minimum in the servicing of requests. Priorities must be established that are reasonable and agreed upon by all of the users. Equipment for retrieval of information should be fitted to the individual requirements of the users. No participant in the system should be slighted, even though his share of the system may not be as great as another.

5. Equitable Distribution of Costs

While a common information system may reduce costs in some areas, its most important feature consists of making standard information available to a variety of users who share in it. This aspect is stressed above cost saving, for the implementation of such a system is usually quite expensive. The design of the system, the collection, classification and editing of the information to be stored in it, maintenance of the system, and retrieval of information are all explicit costs. Because a computer system is an "active" means of storing and retrieving information, that is, money is required to place information in storage, maintain it, and retrieve it, as opposed to the "passive" nature of most conventional filing systems, whose inert nature conceals their true costs which consist of information lost or misplaced and of man-hours not directly

attributed to this cause spent in attempting to locate material, every step in processing is an explicitly attributable cost. As noted above, the sums required to develop a common information system which will make use of the computer are very large. In fact, even the specification of the cost of systems design is not possible until some agreement has been reached on the scope of the system, both in terms of the number of agencies participating and the length of the files to be stored.

There must be agreement among the agencies upon sharing the costs of both design of the system and its operation. This will involve payment for collection and storage of information as well as payment for services. No single partner in the system should be expected to shoulder a major share of the costs of its operation.

C. REGIONAL COORDINATION

This report has been concerned with the desirability of a system that will organize the information resources to meet the needs common to agencies in San Francisco government. At the same time, it is important to note the implications of concurrent information systems development in the Bay Area.

Locally, the San Francisco Chamber of Commerce is undertaking the development of a nonprofit Community Data Bank service, whose objective will be the collection, storage, and distribution of information, especially about employment and economic

resources of the Bay region. Santa Clara County has already developed a major information system, known as LOGIC for use in its governmental operations. The City of Oakland, using funds provided by a Federal grant, has developed a planning information system. The Pacific Telephone Company is currently proposing an information system dealing with land use in which they hope to interest local and regional agencies as participants. On the State level, there have been several proposals for the development of land use information systems. The most recent of these, the California Regional Land Use Information System, is under consideration by the State Officer of Planning.

The proliferation of independent systems poses important problems of coordination in order that they may be consistent with each other and that unnecessary duplication of effort be avoided, At this time, two voluntary committees are in existence composed of representatives of various City and County governments in the Bay Area. The older of these is a committee sponsored by the Association of Bay Area Governments and is known as the Bay Area Automated Information Systems Coordinating Committee. More recently formed, principally under the auspices of Santa Clara County, is the Bay Area Property Systems Committee. These are, as noted, voluntary committees, and their principal purpose has been to meet and discuss various systems developments and to make recommendations about the

best means of coordinating the individual and regional efforts. However, their recommendations are in no way binding, and one of the major difficulties encountered in the committees is the lack of adequate staff support to do the research necessary to insure compatible and consistent development of each of the individual systems.

This problem of regional coordination is one that must be taken into account if effective interchange of information between public and private agencies and among the cities and counties of the Bay Area is to occur. It is a matter that transcends the boundaries of individual jurisdictions and interests, and is sometimes apt to be slighted when the very real local problems of systems development are being dealt with. Ultimately, however, there is no question that this issue must be faced if the various jurisdictions of the Bay Area wish to avoid the "Balkanization" of information systems and the real difficulties this will pose for the future exchange of useful information.

III. An Interdepartmental List of Information Needs and Resources

Recognizing the need for interdepartmental cooperation and coordination in the establishment of an information system, the project staff undertook a series of informal interviews to determine the information each department might seek from an established system and information it could contribute. The results of the survey are given in the following table. As in the previous list of items recorded for the Department of City Planning, it must be recognized that not all of the items listed may be desirable or attainable in an operational information system. Further, items not now considered useful in any particular department's operation may become so in the future. However, the list does provide: (1) an indication of informational needs and, hence, the scope of the system; (2) sources of information currently available.

The authors of the study have made no attempt to evaluate the stated needs for information. Such an evaluation, necessarily painstaking and complicated, can only be accomplished when detailed design studies of the information system are undertaken. A list of persons who cooperated with the staff in giving their time, advice, and information about their department's specific needs is attached.

EXPLANATION OF NOTES AND SYMBOLS

s = Source only

su = Source and user

u = User only

u+ = Potential user if item would be available

a = Uses different code, their own

b = For places they inspect

c = For lots in Redevelopment area

d = For the Downtown Zoning Study area

e = In design, potential source

h = For public housing

i = Not kept updated

j = Commercial and industrial areas of police patrol

k = FACE loans

su[1] = Before, during and after Redevelopment

3 = Need the migration data derived from these items

REAL PROPERTY DATA	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Locational Items																						
Lot number	su		u	u			u	u		u			u			u	u	u	u	u	u	
Block number	su		u	u			u	u	u	u			u	u		u		u	u	u	u	
Street address	u	u	u	u	u		u	u	u	u				u	u	u	u	u	u	u	u	
Grid coordinates	u+	u+	u+	u+	s+u+	u+		u+	u+	u+	u+	u+	u+	u+	s+u+	u+	u+	u+	u+	u+	u+	
Adjacent lots	su		u	u	u+			u+							u+							
Jurisdiction																						
Garment district	u		u	su				u+	u+						u+			u+	u			
Height "	u		u	su														u	u			
Automotive "	u		u	su				u							u+			u	u			
Fire "			u	u	u			su	u						u+			u	u			
Police "			u	u	u				u						su							
School "		su		u	u+	u+		u+	u			u+	u		u			u	u			
Redevelopment project area	u		u	u						u+								u	u	su		
FACT area	u		u	u						u+								su	u			
Census tract				su		u+			su		u+	u+			su						su	su

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Jurisdiction - continued																						
Census enumeration district				su								u+			u+						u+	
Census block				su								u+			u+						u+	
Corner or interior lot	s		u	u														u				
Sanborn map number			u	su																		
Slide area			u+	u+													su					
fire limits								su									u					
In or abut R/W																						
Highway			u+	u+										u+		u+		u				
BARTD			u+	u+										u+		u+		u				
Date of last sale	su		u+	u+						u+								u				
Price of last sale	su		u+	u+						u+								u				
Owner's name	su		u	u				u+	u+						u			u	u			
Owner's address	su		u	u				u+	u+						u			u	u			
Fires (kinds, dates, losses)			u+	u+	u+			su									u+		u+			
Fire alarm responses (types, dates)					u+			su														
Nearest hydrant distance					u+			u+														

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Nearest alarm box distance					u+			u+														
Lot coverage			u+	u+														u+	u+	s^{c}u		
Nearest public transit				u+	u+	u+			u+		u+	u+				u+					u+	
Mixed land use																						
Nearest Public Health facility (type)				u+	u+	u+			su+		u+				u+						u+	
Public housing			u	u				u+		su					u+				u+			
Land characteristics																						
Lot size:																						
depth	su		u	u						u+						u+		u	u	u		
width	su		u	u						u+						u+		u	u	u		
area	su		u	u						u+			u+			u+		u	u	u		
frontage	su		u	u				u							u	u+		u	u	u		
Topography:																						
degree of slope			u+	u+	u+			u+		u+					u+	u+		u+				
direction of slope			u+	u+	u+			u+		u+					u+	u+		u+				
percent of slope			u+	u+	u+			u+		u+					u+	u+		u+				
elevation			u+	u+	u+			u+		u+			u+		u+	u+		u+	u+			

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Topography - continued																						
Presence of fill land and year of fill			u+	u+	u+					u+			u+			u+		su	u+			
Year of subdivision	su		u	u														u	u			
Year of lot split	su		u	u													u	u	u			
Lot legality			u	u														u+	u+			
Zoning:																						
Current zoning	u		u	su	u+			u		u		u+	u+		u	u+		u	u	u		
Maximum number of dwelling units allowed	u+		u	u				u+	u+							u+		u+	u+			
Rezoning applications			u	su														u				
Previous zoning	u		u	su											u			u	u			
Zoning stipulations			u	su														u+	u+			
Zone variance			u	su															u+			
Automatic conditional use status			u+	su														u+				
Conditional use applications			u	su														u+	u+			
Transitional status			u	su														u+	u+			
Nonconforming use & expiration date			u	su														u+	u+			
Violations			u	su															u+			

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. & Employment
General land use code	$s^a u$	u	$s^d u$	$s^e u$	u+	$s^a u$	u+	$s^b u$	u+	u+	u+		u+	$s^a u$	u+		u+	u+	$s^c u$		su	
On-street parking spaces		u+	u+	u+									u+	u+	u+		u+					
Off-street parking spaces		u+	$(s^d u+)u+$										u+		u+		u+	u+				
Lot & block nos. of other lots comprising/site (common)	su	u+	u+	u+			u+	u+						u+				u+				
Assessed value:																						
Land, year assessed	su	u	u							u		u	u		u			u	su^1			
Improvements, year assessed	su	u	u							u		u	u		u			u	su^1			
Total assessed value	su	u	u							u		u	u		u			u	su^1			
Taxes	u	u	u				su											u	su^1			
Tax exempt status	u	u	u				su								u			u	u			
Year first assessed	u	u	u				su											u				
Personal property exemption	u	u	u				su											u				
Building Characteristics:																						
No. buildings on lot	$s^i u$	u+	u+	u+				u+						$s^j u+$	u+		u+	u+	u+			
Setbacks		u	su														u					
Year built	u	u	u		u+		u		u+						u+		su	u	u			

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Building Characteristics - continued																						
Type of construction		u	u	u+	u+		u			u+					u+	u+		su	u	$s^c u$		
Cost of construction	u	u	u							u+						u+		su	u	$s^c u$		
Floor area ratio		u+	(s^du+)															u+		$s^c u$		
Area of first floor	$s^i u$	u+	u+																			
Gross floor area	$s^i u$	u+	$s^d u$		u+	u+							u+			u+		su				
Number of floors		u+	u+	u+		u+													u+			
Height of building		u+	u+	u+				u+							u+	u+			u+			
Number of dwelling units	$s^i u$	u+	u+	u+	u+	u+		u+		$s^h u$	u+					u+		su+	u+	$s^c u$		
No. of bedrooms per structure					u+	u+				$s^h u$									u+	$s^c u$		
Condition of building	$s^i u$	u+	u+	u+	u+			u+	u+	u+					u+				u+	u+	u+	
Conversion permits and date(DPW appl.# & type wk done)	u	u+	u															su	u+			
Demolitions, and date	u		u	u+													u+	su	u+			
Location of utility control panels & shutoffs				u+				su							u+							
Location of combustible materials				u+				su							u+							

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Building Characteristics - continued																						
Fire prevention inspections :				u+				su														
Date of last inspection				u+				su														
Violations			u+	u+				su							u+							
Specific hazards				u+				su							u+							
Presence of automatic fire sprinklers				u+				su										su				
Presence of fire wall				u+				su														
Special permits:																						
Police			u+	u+											su							
Health			u+	u+					su						u+							
Fire			u+	u+				su							u+							
Public Works condemnations			u+															su	u+	u+		
Public Works abatement			u+															su				
Health Department condemnations			u+						su						u+				u+	u+		
Number of bathrooms	$s^{i}u$																					
Number of rooms per structure	su		u+	u+		u+												u+		$s^{c}u$		

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Department	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Building Characteristics - continued																						
Dollar amount of improvements made during redevelopment project	u+			u+													u+			$s^c u$		
Tax delinquent							su		u+			u+							u+	u+		
Alteration permits (& date, DPW appl.# & work done)			u+	u+													su		u+	u+		
Building permits (& date, DPW appl.#, work done)			u+	u+													su		u+			
Dollar amount of improvements since construction	su		u+	u+													u+		u+			
Method of financing				u+		u+					u+								$s^k u$	$s^c u$		u+
Size of bedrooms											u+									$s^c u$		
Location of each unit in bldg. (by characteristics)				u+					u+											$s^c u$		
Dollar amount of improvements needed				u+					u+											$s^c u$		
Dwelling units on ground floor				u+																		u+
Dwelling units not on ground floor																						u+
Number of steps to dwelling unit																						u+
Presence of elevators				$s^d u$																		u+
Occupancy classification																	su					
Certificate of occupancy and date			u+	u+													su	u+				

REAL PROPERTY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Dept.	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Wks.	Real Estate	Redevelopment	Social Services	State Dept. Employment
Building Characteristics - continued																						
Original occupancy or use			u+	u+														su	u+			
Frontage of building			u+	u+														su	u+			
Depth of building			u+	u+														su	u+			
Exterior wall material			u+	u+	u+			u+										su				
Full or partial basement																		su				
Boiler data								u+										su				
Air tank data								u+										su				
Value of permit																		su				
No. of inspections per permit																		su				
Certificate of final completion			u+	u+														su				
Warning of DPW violation			u+															su				
Illegal units dismantled			u+	u+						u+								su				
Number of registered motor vehicles				u+	u+	u+			u+				u+	u+	su	u+		u+				
Number of licensed drivers		u+		u+	u+	u+			u+			u+	u+	u+	su	u+		u+				

SURVEY DATA (BY CENSUS TRACT)	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Dept.	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Wks.	Real Estate	Redevelopment	Social Services	State Dept. Employment
Number of persons	+			+	+	+		+	+		+	+	+	+	+	+		+		+	+	
Age	+			+	+	+		+	+		+	+	+	+	+	+		+		+	+	
Sex	+			+	+	+			+		+	+	+	+	+	+				+	+	
Race	+			+		+			+		+	+	+	+	+	+				+	+	
Education	+			+		+			+		+	+	+	+	+	+					+	
Median family income	+			+		+			+		+	+	+	+	+	+				+	+	
Occupation	+			+	+	+			+		+	+	+		+	+					+	
Place of work				+	+	+			+				+	+		+		+			+	
Rent paid				+		+			+		+	+	+			+			+	+	+	
Number unemployed	+			+	+	+			+		+		+	+	+						+	
Means of transportation to work				+	+	+			+		+	+	+	+	+	+		+			+	
Average household size	+			+	+	+			+		+	+	+	+	+	+				+	+	
Type of housing unit	+			+	+	+			+		+	+	+		+	+		+			+	
# bedrooms per dwelling unit	+			+		+			+		+								+		+	
bathroom & kitchen facilities	+			+		+			+						+				+		+	
Nationality	+			+		+			+		+	+	+		+	+					+	

SURVEY DATA continued

	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps.	Econ. Opport. Council	Finance & Records	Fire Dept.	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Data Obtained from Other City Department Information Systems (by census tract)																						
School Data																						
Number of students		su		u+	u+	u+		u+	u[3]		u[3]	u+	u+		u+	u+		u+			u+	
by age		su		u+	u+	u+			u[3]		u[3]	u+	u+		u+	u+		u+			u+	
by race		su		u+		u+			u[3]		u[3]	u+			u+						u+	
by grade		su		u+	u+	u+			u[3]		u[3]	u+	u+		u+	u+					u+	
by previous residence		su		u+		u+			u[3]		u[3]	u+			u+							
Number of high school dropouts		su		u+		u+			u+		u+	u+			u+						u+	
Public Housing Residents																						
Number of persons				u+	u+	u+		u+	u+	su	u+	u+	u+		u+			u+			u+	
by population per household				u+	u+	u+		u+	u+	su	u+	u+	u+		u+			u+			u+	
by age				u+	u+	u+			u+	su	u+	u+	u+		u+						u+	
by sex				u+	u+	u+			u+	su	u+	u+			u+						u+	
by race				u+	u+	u+			u+	su	u+	u+			u+						u+	
by income				u+		u+			u+	su	u+	u+			u+						u+	
by rent				u+		u+			u+	su	u+	u+									u+	

SURVEY DATA - continued	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Dept.	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Department Employment
Welfare Data																						
People receiving public assistance by type				u+		u+			u+		u+	u+			u+						su	
by age, race, sec, education, income				u+		u+			u+		u+	u+			u+							
Yearly survey of ADC families						u+			u+		u+										su	
amount of rent paid				u+		u+			u+		u+										su	
type of housing				u+		u+			u+		u+										su	
condition of housing				u+		u+			u+		u+										su	
income				u+		u+			u+		u+										su	
Public Health Data																						
Births				u+	u+	u+			su		u+				u+	u+		u+				
Deaths				u+	u+	u+			su		u+				u+	u+		u+				
Morbidity				u+	u+	u+			su		u+				u+	u+		u+				
Criminal Offenses				u+		u+					u+				su							
Juvenile Court Cases				u+		u+					u+				su							

SURVEY DATA - continued

	Assessor	Bd. of Educ.	Bd. of Permit Appeals	City Planning	Disaster Corps	Econ. Opport. Council	Finance & Records	Fire Dept.	Health Dept.	Housing Auth.	Human Rights Comm.	Library	Recreation & Park	Parking Auth.	Police	Public Utilities	Water Dept.	Public Works	Real Estate	Redevelopment	Social Services	State Dept. Employment
Non-residential Space Use																						
Establishment name	su			u+	u+	u+	su	u+	u+				u+		$s^j u$	u+	su	u+				su
Establishment location	su			u+	u+	u+	su	u+	u+				u+		$s^j u$	u+	su	u+				su
SIC land use classification				u+	u+	u+		u+	u+		u+		u+		u+	u+				$s^c u$		su
Zoning classification where this use 1st permitted			u+	su				u+	u+						u+			u+	u+		u+	
Establishment owner's name			u+	u+	u+	u+	su	u+	u+		u+				$s^j u$		su	u+				
Establishment owner's address			u+	u+	u+	u+	su	u+	u+		u+				$s^j u$		su	u+				
Number of employees			u+	u+	u+	u+	u+	u+	u+		u+		u+		u+	u+		u+		u+		su

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